

2PA1015GR,126 Datasheet

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DiGi Electronics Part Number

Manufacturer Product Number

Description

Manufacturer

Detailed Description

2PA1015GR,126-DG

NXP USA Inc.

2PA1015GR,126

TRANS PNP 50V 0.15A TO92-3

Bipolar (BJT) Transistor PNP 50 V 150 mA 80MHz 50 0 mW Through Hole TO-92-3

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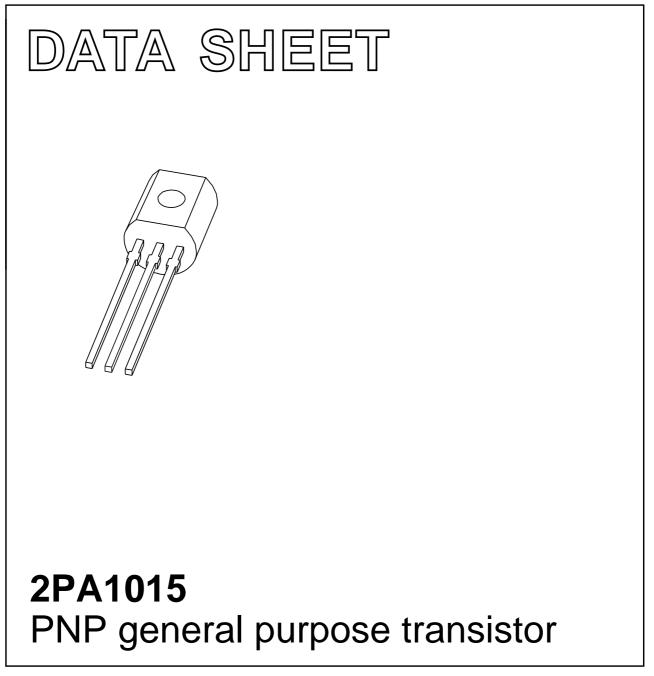
Purchase and inquiry

Manufacturer Product Number:	Manufacturer:
2PA1015GR,126	NXP USA Inc.
Series:	Product Status:
	Obsolete
Transistor Type:	Current - Collector (Ic) (Max):
PNP	150 mA
Voltage - Collector Emitter Breakdown (Max):	Vce Saturation (Max) @ lb, lc:
50 V	300mV @ 10mA, 100mA
Current - Collector Cutoff (Max):	DC Current Gain (hFE) (Min) @ lc, Vce:
100nA (ICBO)	200 @ 2mA, 6V
Power - Max:	Frequency - Transition:
500 mW	80MHz
Operating Temperature:	Mounting Type:
150°C (TJ)	Through Hole
Package / Case:	Supplier Device Package:
TO-226-3, TO-92-3 (TO-226AA) Formed Leads	TO-92-3
Base Product Number:	
2PA10	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
ROHS3 Compliant	1 (Unlimited)
REACH Status:	ECCN:
REACH Unaffected	EAR99
HTSUS:	
8541.21.0095	

DISCRETE SEMICONDUCTORS



Product specification Supersedes data of 1999 Apr 08 2004 Oct 11



Philips Semiconductors

Product specification

2PA1015

PNP general purpose transistor

FEATURES

- Low current (max. 150 mA)
- Low voltage (max. 50 V).

APPLICATIONS

• General purpose switching and amplification.

DESCRIPTION

PNP transistor in a plastic TO-92; SOT54 package. NPN complement: 2PC1815.

PINNING

PIN	DESCRIPTION	
1	base	
2	collector	
3	emitter	

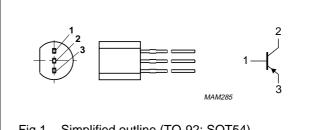


Fig.1 Simplified outline (TO-92; SOT54) and symbol.

ORDERING INFORMATION

TYPE NUMBER		PACKAGE			
ITFE NUMBER	NAME	DESCRIPTION	VERSION		
2PA1015Y	SC-43A	plastic single-ended leaded (through hole) package; 3 leads	SOT54		
2PA1015GR					

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	-	-50	V
V _{CEO}	collector-emitter voltage	open base	-	-50	V
V _{EBO}	emitter-base voltage	open collector	-	-5	V
I _C	collector current (DC)		-	-150	mA
I _{CM}	peak collector current		-	-200	mA
I _{BM}	peak base current		-	-200	mA
P _{tot}	total power dissipation	$T_{amb} \le 25 \ ^{\circ}C;$ note 1	-	500	mW
T _{stg}	storage temperature		-65	+150	°C
Tj	junction temperature		-	150	°C
T _{amb}	ambient temperature		-65	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

PNP general purpose transistor

2PA1015

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th(j-a)}	thermal resistance from junction to ambient	note 1	250	K/W

Note

1. Transistor mounted on an FR4 printed-circuit board.

CHARACTERISTICS

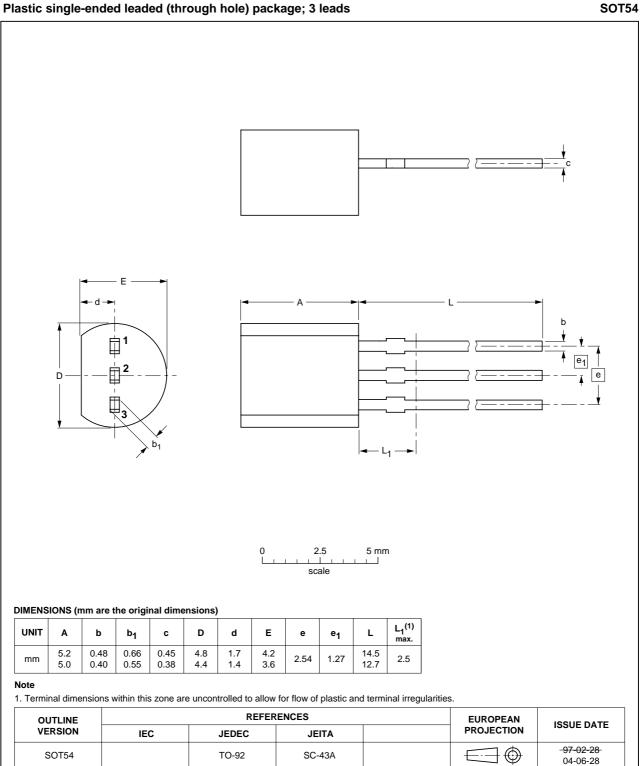
 $T_j = 25 \ ^{\circ}C$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
I _{CBO}	collector-base cut-off current	$V_{CB} = -50 \text{ V}; \text{ I}_{\text{E}} = 0 \text{ A}$	_	-	-100	nA
I _{EBO}	emitter-base cut-off current	$V_{EB} = -5 \text{ V}; \text{ I}_{C} = 0 \text{ A}$	-	-	-100	nA
h _{FE}	DC current gain	$V_{CE} = -6 \text{ V}; \text{ I}_{C} = -2 \text{ mA}$				
	2PA1015Y		120	-	240	
	2PA1015GR		200	-	400	
h _{FE}	DC current gain	$V_{CE} = -6 \text{ V}; I_C = -150 \text{ mA}$	25	-	-	
V _{CEsat}	collector-emitter saturation voltage	$I_{\rm C} = -100 \text{ mA}; I_{\rm B} = -10 \text{ mA}$	_	-	-300	mV
V _{BEsat}	base-emitter saturation voltage	$I_{\rm C} = -100 \text{ mA}; I_{\rm B} = -10 \text{ mA}$	_	-	-1.1	V
Cc	collector capacitance	$V_{CB} = -10 \text{ V}; I_E = i_e = 0 \text{ A}; f = 1 \text{ MHz}$	_	4	7	pF
f _T	transition frequency	$V_{CB} = -10 \text{ V}; I_{C} = -1 \text{ mA}; f = 100 \text{ MHz}$	80	-	-	MHz
F	noise figure	$V_{CE} = -5 \text{ V}; \text{ I}_{C} = -200 \mu\text{A}; \text{ R}_{S} = 2 k\Omega;$ f = 1 kHz; B = 200 Hz	_	-	10	dB

PNP general purpose transistor



Philips Semiconductors



2PA1015

PNP general purpose transistor

2PA1015

DATA SHEET STATUS

LEVEL	DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾⁽³⁾	DEFINITION
I	Objective data	Development	This data sheet contains data from the objective specification for product development. Philips Semiconductors reserves the right to change the specification in any manner without notice.
11	Preliminary data	Qualification	This data sheet contains data from the preliminary specification. Supplementary data will be published at a later date. Philips Semiconductors reserves the right to change the specification without notice, in order to improve the design and supply the best possible product.
	Product data	Production	This data sheet contains data from the product specification. Philips Semiconductors reserves the right to make changes at any time in order to improve the design, manufacturing and supply. Relevant changes will be communicated via a Customer Product/Process Change Notification (CPCN).

Notes

- 1. Please consult the most recently issued data sheet before initiating or completing a design.
- 2. The product status of the device(s) described in this data sheet may have changed since this data sheet was published. The latest information is available on the Internet at URL http://www.semiconductors.philips.com.
- 3. For data sheets describing multiple type numbers, the highest-level product status determines the data sheet status.

DEFINITIONS

Short-form specification — The data in a short-form specification is extracted from a full data sheet with the same type number and title. For detailed information see the relevant data sheet or data handbook.

Limiting values definition — Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 60134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.

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